

## Warm-up

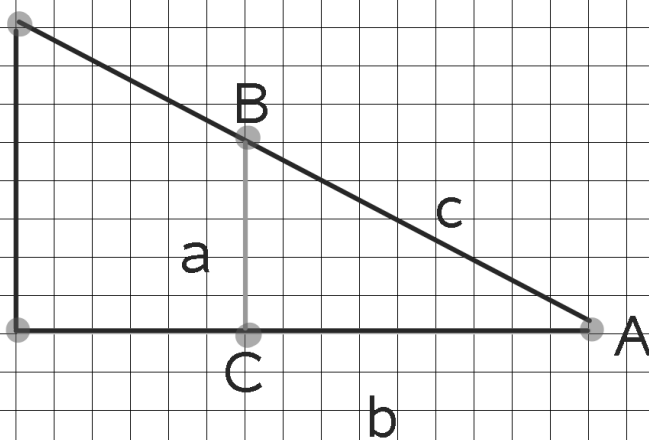
Is this a proportion?

$$\frac{5}{10} \stackrel{?}{=} \frac{12}{22}$$

$$110 \neq 120$$

7:7

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Find the length of each side of each triangle.

Triangle	a	b	c	a/b	a/c	b/c
First	9	9	10.3	$\frac{9}{9} = .55$	$\frac{9}{10.3} = .49$	$\frac{9}{10.3} = .87$
Second	8	15	17	$\frac{8}{15} = .53$	$\frac{8}{17} = .47$	$\frac{15}{17} = .88$

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Find the length of each side of each triangle.

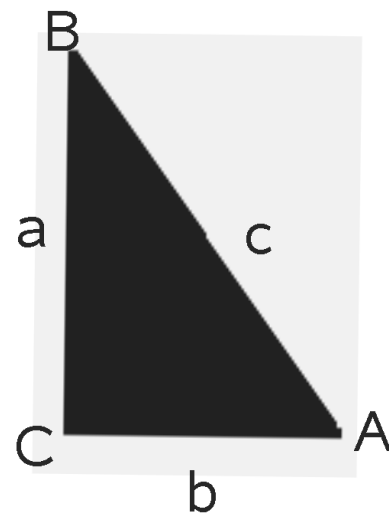
Triangle	a	b	c	a/b	a/c	b/c
First						
Second						

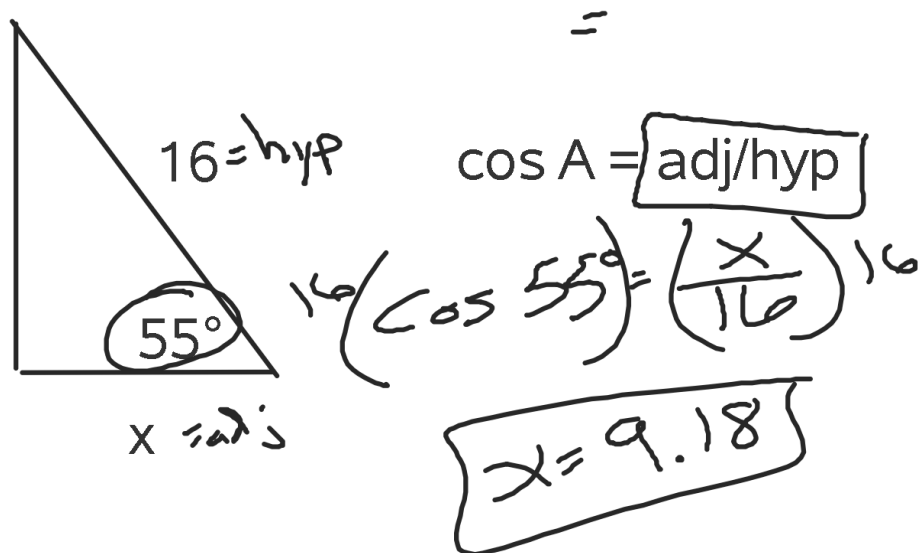
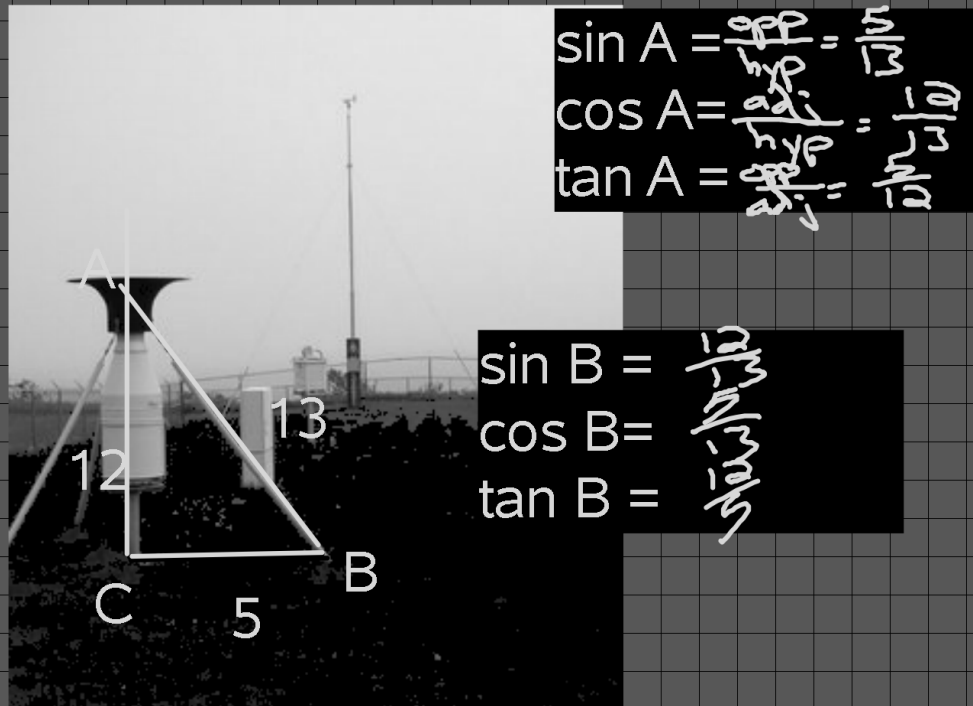
How do corresponding ratios compare?

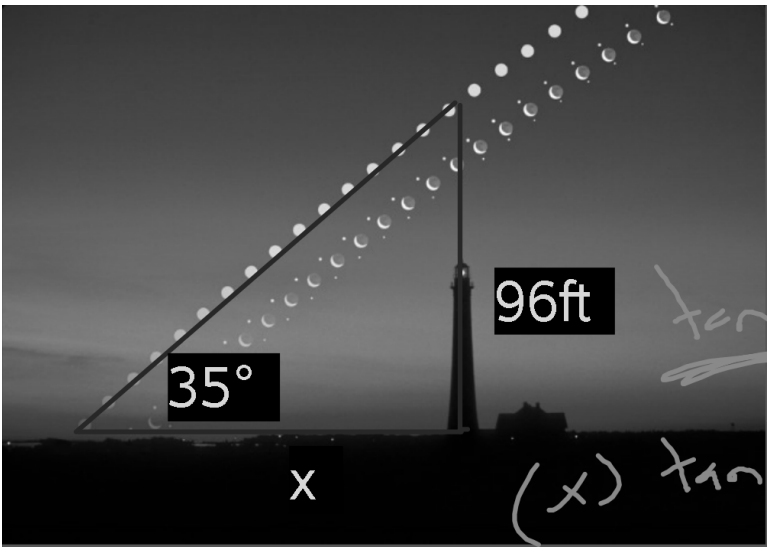
$$\sin \angle A = \frac{\text{opp}}{\text{hyp}} = a/c$$

$$\cos \angle A = \frac{\text{adj}}{\text{hyp}} = b/c$$

$$\tan \angle A = \frac{\text{opp}}{\text{adj}} = a/b$$







Find the length of x.


$\tan 35^\circ = \frac{\text{opp}}{\text{adj}}$

$(x) \tan 35^\circ = \frac{96}{x} (x)$

$x \frac{\tan 35^\circ}{\tan 35^\circ} = \frac{96}{\tan 35^\circ}$

$x = \frac{96}{.70} = 137.14$

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Find the length of x.

$\cos 65^\circ = \frac{a}{h}$

$\cos 65^\circ = \frac{x}{14}$

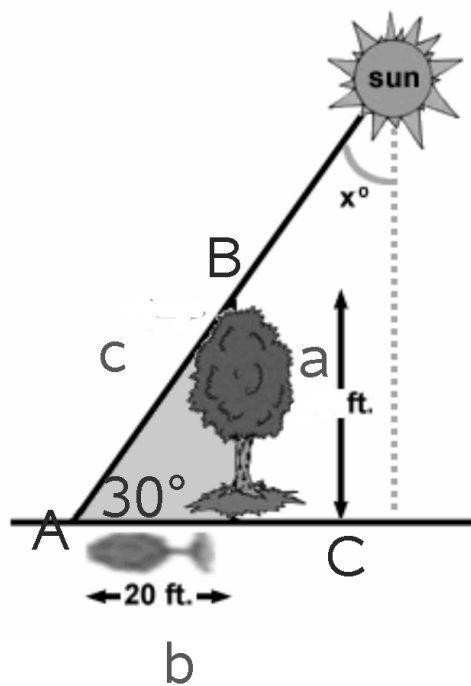
$4(.42) = \frac{x}{14} (14)$

$x = 5.9$

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E  
x  
i  
t  
  
p  
a  
s  
s



How tall is the tree?



